

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Aloe vera

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
14	ACEMANNAN	Leaf				--
14	ACEMANNAN	Juice				Lee, S. Y., Ryu, I. W., Shim, C. S. 1997. Purification and Characterization of Bioactivity Compound Acemannan from Aloe vera. Korean J. Pharmacog., 28(2): 65-71.
3	ALANINE	Leaf		15769.0	0.737970393738035	--
5	ALOCUTIN-A	Plant				Pakistan Encyclopedia Planta Medica. 1986.
24	ALOE-EMODIN	Juice				--
24	ALOE-EMODIN	Leaf		45.4		--
24	ALOE-EMODIN	Plant				--
2	ALOESIN	Leaf				--
2	ALOESIN	Juice				Rauwald, H. W., Maucher, R., Niyonizima, D. D. 1997. Three 8-C-glucosyl-5-methyl-chromones from Aloe barbadensis (Ph. Eur. 1997). Pharmazie, 52(12): 962-964.
2	ALOESIN	Plant				--
12	ALOIN	Leaf				--
5	ALUMINUM	Leaf		22.0	-0.756963512814621	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	AMYLASE	Leaf	0.0	20.0		Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
6	ANTHRAQUINONES	Plant		300000.0		Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
12	ARACHIDONIC-ACID	Juice				Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.

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12	ARACHIDONIC-ACID	Plant				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. <i>Herbal Medicine - A Guide for Health-care Professionals.</i> The Pharmaceutical Press, London. 296pp.
12	ARACHIDONIC-ACID	Shoot				Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in <i>Aloe vera</i> Extracts. <i>Plant Medica</i> , 57(1): 38-40.
14	ARGININE	Leaf		78216.0	4.040361114705058	--
112	ASCORBIC-ACID	Leaf		6260.0	0.13692813428133838	Pedersen, M. 1987. <i>Nutritional Herbology.</i> Pederson Publishing. Bountiful, Utah. 377 pp.
2	ASPARAGINE	Leaf				Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of <i>Aloe barbadensis</i> . <i>Proc. Okla. Acad. Sci.</i> 58: 69-.
3	ASPARTIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
3	ASPARTIC-ACID	Leaf				Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of <i>Aloe barbadensis</i> . <i>Proc. Okla. Acad. Sci.</i> 58: 69-.
6	BARBALOIN	Plant				Suga, T., Hirata, T. 1983. The Efficacy of the <i>Aloe</i> Plants Chemical Constituents and Biological Activities. <i>Cosmet. Toiletries</i> 98(6): 105-108.
6	BARBALOIN	Juice				--
6	BARBALOIN	Leaf		42400.0		--
1	BENZYL-ACETONE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
53	BETA-CAROTENE	Stem Essent. Oil		7.2		Rowe, T. D., Parks, L. M. 1941. A Phytochemical Study of <i>Aloe vera</i> Leaf. <i>J. Amer. Pharm. Ass. Sci. Ed.</i> , 30: 262-266.
53	BETA-CAROTENE	Leaf		3.0	-1.1248743086080972	Pedersen, M. 1987. <i>Nutritional Herbology.</i> Pederson Publishing. Bountiful, Utah. 377 pp.
47	BETA-SITOSTEROL	Leaf				--

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47	BETA-SITOSTEROL	Plant				--
4	BRADYKININASE	Plant				--
28	CALCIUM	Leaf	190.0	4600.0	-0.9454619722825477	--
4	CALCIUM-OXALATE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
4	CALCIUM-OXALATE	Leaf				Rowe, T. D., Parks, L. M. 1941. A Phytochemical Study of Aloe vera Leaf. J. Amer. Pharm. Ass. Sci. Ed., 30: 262-266.
2	CAMPESTEROL	Plant				--
2	CAMPESTEROL	Leaf				--
1	CATALASE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	CHOLESTEROL	Leaf	40.0	120.0		--
1	CHOLESTEROL	Plant				Suga, T., Hirata, T. 1983. The Efficacy of the Aloe Plants Chemical Constituents and Biological Activities. Cosmet. Toiletries 98(6): 105-108.
1	CHOLESTEROL	Shoot				Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in Aloe vera Extracts. Plant Medica, 57(1): 38-40.
20	CHOLINE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
2	CHOLINE-SALICYLATE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
24	CHROMIUM	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
5	CHRYSAZIN	Leaf				Zwaving, J. H., Elema, E. T. 1976. A Comparative Investigation of Two Methods for the Determination of 1,8-dihydroxyanthracene Derivatives in Vegetable Drugs. Pharm. Weekbl. 111: 1315-.
6	CHRYSOPHANIC-ACID	Juice				Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of Aloe barbadensis. Proc. Okla. Acad. Sci. 58: 69-.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	CHRYSOPHANIC-ACID	Leaf				Mary, N. Y., Christensen, B. V., Beal, J. L. 1956. A Paper Chromatographic Study of Aloe, Aloin and Cascara sagrada. <i>J. Amer. Pharm. Ass. Sci. Ed.</i> , 45: 229-232.
6	CHRYSOPHANIC-ACID	Plant				--
10	CHRYSOPHANOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
18	CINNAMIC-ACID	Plant				--
2	COBALT	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
6	CONIFERYL-ALCOHOL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
57	COUMARIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
13	CYSTEINE	Leaf				Yagi, A., Shida, T., Nishimura, H. 1987. Effect of Amino Acids in Aloe Extract on Phagocytosis by Peripheral Neutrophil in Adult Bronchial Asthma. <i>Jap. J. Allergol.</i> 36(12): 1094-1101.
2	CYSTINE	Juice				Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of Aloe barbadensis. <i>Proc. Okla. Acad. Sci.</i> 58: 69-
1	D-GLUCOSE	Leaf				Haq, Q. N., Hannan, A. 1981. Studies on Glucogalactomannan from the Leaves of Aloe vera Tourn. (Ex. Linn). <i>Bangladesh J. Sci. Ind. Res.</i> 16 1/4: 68-72.
58	EMODIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
58	EMODIN	Leaf				Saleem, R., Faizi, S., Deeba, F., Siddiqui, B. S., Qazi, M. H. 1997. Anthrones from Aloe barbadensis. <i>Phytochemistry</i> , 45(6): 1279-1282.
15	FIBER	Leaf		177000.0	0.1912434448814181	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
15	FOLACIN	Leaf	0.027	0.2	-1.0215226996703113	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
23	FOLIC-ACID	Leaf	27.0	200.0	0.9999999999999997	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
13	FORMIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
8	FRUCTOSE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
8	FRUCTOSE	Stem Essent. Oil				Rowe, T. D., Parks, L. M. 1941. A Phytochemical Study of Aloe vera Leaf. J. Amer. Pharm. Ass. Sci. Ed., 30: 262-266.
8	FRUCTOSE	Leaf				Rowe, T. D., Parks, L. M. 1941. A Phytochemical Study of Aloe vera Leaf. J. Amer. Pharm. Ass. Sci. Ed., 30: 262-266.
1	GALACTOSE	Leaf				--
1	GALACTOSE	Plant				--
3	GLUCOMANNAN	Leaf				Mandal, G., Das, A. 1980. Characterization of the Polysaccharides of Aloe barbadensis Miller, Part II. Structure of the Glucomannan Isolated from the Leaves of Aloe barbadensis Miller. Carbohydr. Res. 87: 249-256.
3	GLUCOMANNAN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
1	GLUCOSAMINE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
7	GLUCOSE	Leaf	280.0	1030.0	-0.6406770531666487	--
8	GLUTAMIC-ACID	Leaf		43256.0	0.28830994883469857	--
5	GLUTAMINE	Leaf		20607.0		--
8	GLYCEROL	Plant				Pakistan Encyclopedia Planta Medica. 1986.
12	GLYCINE	Leaf		5030.0	-1.4304208502349065	--
7	HISTIDINE	Leaf		2327.0	-1.5303131560149847	--
1	HYDROXYPROLINE	Juice				Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of Aloe barbadensis. Proc. Okla. Acad. Sci. 58: 69-.

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6	IRON	Leaf	30.0	300.0	-0.1601568835092345	Aloe Research Council - Duke writeup of non-peer reviewed book by Coats and draft by Henry
3	ISOLEUCINE	Leaf		8526.0	-0.9114311540762737	--
7	LAURIC-ACID	Juice				Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
2	LEUCINE	Leaf		6952.0	-1.4724738413689846	--
13	LIGNIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
27	LINOLEIC-ACID	Juice				Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
21	LUPEOL	Plant				--
21	LUPEOL	Leaf				--
4	LYSINE	Leaf		7748.0	-1.1656410239523205	--
65	MAGNESIUM	Leaf		930.0	-1.233985540583036	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
14	MANGANESE	Leaf		0.6	-0.45888840936498615	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
3	MANNOSE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
3	MANNOSE	Leaf				--
3	MUCILAGE	Plant				Pakistan Encyclopedia Planta Medica. 1986.
3	MUCILAGE	Leaf				Segal, A., Taylor, J. A., Eoff III, J. C. 1968. A Re-Investigation of the Polysaccharide Material from Aloe vera mucilage. Lloydia 31(4): 423E.
1	MUCOPOLYSACCHARIDES	Plant				Pakistan Encyclopedia Planta Medica. 1986.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	MYRISTIC-ACID	Juice				Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
39	NIACIN	Leaf		64.0	-0.4074895973394803	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	NIACINAMIDE	Plant				--
1	OCTADEC-1-ENE	Juice				Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
18	OLEIC-ACID	Shoot				Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in Aloe vera Extracts. Plant Medica, 57(1): 38-40.
1	OLEIC-ACID-ETHYL-ESTER	Juice				Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
25	P-COUMARIC-ACID	Juice				Waller, G. R., Mangiafico, S., Ritchey, C. R. 1978. A Chemical Investigation of Aloe barbadensis. Proc. Okla. Acad. Sci. 58: 69-
25	P-COUMARIC-ACID	Leaf				Doff, W. 1953. In Vitro Tuberculostatic Action of Aloe and its Most Important Components. Arzneim-Forsch 3: 627-630.
25	P-COUMARIC-ACID	Plant				Pakistan Encyclopedia Planta Medica. 1986.
13	PALMITIC-ACID	Juice				Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	PALMITIC-ACID-ETHYL-ESTER	Juice				Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
2	PALMITOLEIC-ACID	Juice				Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
1	PENTADECANOIC-ACID	Juice				Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
7	PHENYLALANINE	Leaf		7103.0	-0.8189293423736816	--
2	PHOSPHATIDYL-CHOLINE	Shoot				Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in Aloe vera Extracts. Plant Medica, 57(1): 38-40.
4	PHOSPHORUS	Leaf	6.0	940.0	-0.7417351347095709	--
2	PHYTOSTEROLS	Plant				Pakistan Encyclopedia Planta Medica. 1986.
30	POLYPHENOLS	Plant				Pakistan Encyclopedia Planta Medica. 1986.
14	POTASSIUM	Leaf	100.0	850.0	-1.3023924982974464	--
18	RHEIN	Plant				Pakistan Encyclopedia Planta Medica. 1986.
18	RHEIN	Juice				Vittori, N., Collins, M. 1996. Production of Rhein and Rhein Derivatives for Treatment of Mycobacterial Infections.
15	RIBOFLAVIN	Leaf				Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
5	SAPONINS	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	SELENIUM	Leaf		2.3	-0.20582736095134732	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	SERINE	Leaf		23540.0	2.8994578607835177	--
4	SILICON	Leaf		2.2	-0.40664836341939714	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	SODIUM	Leaf	40.0	510.0	-0.5567053929446788	--
8	STEARIC-ACID	Juice				Yamaguchi, I., Mega, N., Sanada, H. 1993. Components of the Gel of Aloe vera (L.) Burm. F. Biosci Biotech Biochem 57(8): 1350-1352.
12	STIGMASTEROL	Shoot				Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in Aloe vera Extracts. Plant Medica, 57(1): 38-40.
31	THIAMIN	Leaf		0.8	-1.5639990589196717	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
4	THREONINE	Leaf		14652.0	1.6302832433742858	--
4	TIN	Leaf		11.0	-0.5530067419183887	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
1	TRIOLEIN	Shoot				Afzal, M., Ali, M., Hassan, R. A. H., Sweedan, N., Dhami, M. S. I. 1991. Identification of Some Prostanoids in Aloe vera Extracts. Plant Medica, 57(1): 38-40.
8	TYROSINE	Leaf		5073.0	-0.8148273240686774	--
3	VALINE	Leaf		12769.0	0.02133791872334207	--
3	XYLOSE	Leaf				--
3	XYLOSE	Plant				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
77	ZINC	Leaf	11.0	770.0	4.198735238139277	--